

IN THE CLAIMS

1 (Currently Amended). A method comprising:
demultiplexing at least one wavelength ~~two wavelengths~~ from a multiplexed optical signal; and
detecting ~~each of said demultiplexed wavelengths~~ wavelength using an L-shaped detector; and
~~generating a third wavelength to multiplex on said multiplexed optical signal.~~

2 (Original). The method of claim 1 including providing an angled reflector in the path of said multiplexed signal to reflect light of a first wavelength to a first detector and to pass light of a second wavelength.

3 (Original). The method of claim 1 including receiving said multiplexed optical signal over a waveguide and impressing said third wavelength on said waveguide.

4 (Original). The method of claim 1 wherein demultiplexing includes providing an integrated reflector with a detector of a first wavelength of said at least two wavelengths.

Claim 5 (Canceled).

6 (Currently Amended). The method of claim 1 ~~5~~ including forming said detector on an electrooptical bench.

7 (Original). The method of claim 6 including providing a trench in said bench to receive a portion of said L-shaped detector.

8 (Original). The method of claim 6 including forming said reflector on the surface of said detector.

9 (Original). The method of claim 8 including forming said reflector by coating alternate layers of material on said detector.

10 (Original). The method of claim 8 including using said trench to position said detector on said bench.

11 (Original). The method of claim 7 including forming electrical connections from said bench to one portion of said L-shaped detector.

12 (Currently Amended). An optical system comprising:
a waveguide; and
a demultiplexer coupled to said waveguide to demultiplex at least one wavelength ~~two wavelengths~~ from a multiplexed optical signal on said waveguide, said demultiplexer including a photodetector ~~photodetectors~~ to detect ~~each of~~ said wavelength wherein said demultiplexer includes an integrated reflector and an L-shaped photodetector, said photodetector to detect a wavelength passed by said reflector. ~~wavelengths; and~~
~~a multiplexer coupled to said waveguide to multiplex an optical signal of a third wavelength onto said waveguide.~~

13 (Original). The system of claim 12 wherein said demultiplexer includes an angled reflector to reflect light of a first wavelength to a first detector and to pass light of a second wavelength.

14 (Original). The system of claim 12 wherein said multiplexer includes a laser coupled to a curved waveguide, said curved waveguide having a portion arranged proximately to said waveguide.

15 (Original). The system of claim 14 wherein said laser is coupled at one end of said curved waveguide and a power monitor is coupled to the other end of said curved waveguide.

Claims 16 and 17 (Canceled).

18 (Currently Amended). The system of claim 12 ~~17~~ wherein said demultiplexer, said multiplexer, and said waveguide are formed on a planar substrate including a trench to receive one arm of said L-shaped ~~detector~~ photodetector.

19 (Original). The system of claim 18 wherein said reflector is formed on the surface of said photodetector.

20 (Currently Amended). The system of claim 19 wherein said reflector includes a plurality of layers of material coated on said ~~detector~~ photodetector.

Claims 21-25 (Canceled).